

ABSTRACT OF THE DISCLOSURE

A scanning optical system using a short-wavelength light of 500 nm or less uses a reflecting mirror having a higher absolute
5 reflectivity and having reduced wavelength and angle dependences. Divergent ray of light emitted from a semiconductor laser is converted into an approximately parallel light beam by a collimator lens and the diameter of the light flux is reduced
10 by an aperture before travel to a polygon mirror. The light beam from the polygon mirror passes through scanning lenses to form a small spot at any point in the entire scanning area. The semiconductor laser is a gallium nitride
15 semiconductor laser having an oscillation wavelength of 408 nm. The polygon mirror has such a characteristic that, if the complex refractive index N of a metallic film contributing to a reflection characteristic of the reflecting mirror
20 is defined as $N(\lambda) = n(\lambda) - ik(\lambda)$, then $k(\lambda) > \sqrt{(-n(\lambda)^2 + 18n(\lambda) - 1)}$ is satisfied.